

CLAIMS

1. A data recording/reproducing method utilizing a pattern having an anisotropy formed by irradiating a thin polymer film having an azobenzene site with light,

the data recording/reproducing method comprising the steps of:

forming a surface relief pattern having a fallen portion and a raised portion arranged alternately in a straight line,

controlling the angle of rotation of the straight line, and

recording and reproducing a plurality of data based on the angle of rotation.

2. The data recording/reproducing method as described in Claim 1, wherein

depth data by the difference of depth in the pattern are added.

3. The data recording/reproducing method as described in Claim 1, wherein

the pattern has fallen portions by a number of k and raised portions by a number of $(k + 1)$ (k is a positive integer of 0 or more).

4. The data recording/reproducing method as described in Claim 1, wherein

the raised portions by a number of $(k + 1)$ are arranged alternately in a straight line with the fallen portions by a number of k interposed therebetween, respectively.

5. A data recording medium which utilizes a pattern having an anisotropy formed by irradiating a thin polymer film having an azobenzene site with light, wherein

a surface relief pattern having a fallen portion and a raised portion arranged alternately in a straight line is formed, and

the angle of rotation of the straight line is controlled, and

a plurality of data based on the angle of rotation are recorded and reproduced.

6. The data recording medium as described in Claim 5, wherein depth data by the difference of depth in the pattern are added.

7. The data recording medium as described in Claim 5, wherein a large number of the patterns are formed.

8. The data recording medium as described in Claim 5, wherein the pattern has fallen portions by a number of k and raised portions by a number of $(k + 1)$.

5 9. The data recording medium as described in Claim 5, wherein the raised portions by a number of $(k + 1)$ are arranged alternately in a straight line with the fallen portions by a number of k interposed therebetween, respectively.